

What Is Claimed Is:

1. In a surface mounting device having a module head assembled to an X-Y gantry to be moved in an X-Y axis direction and a feeder for supplying parts to a printed circuit board carried by a transfer device in order to mount the surface mounting parts, the feeder for a surface mounting device comprising:

a main frame;

10 a parts feeding unit including a forward/backward rotation force generating means being installed at one side of the main frame and for carrying a tape at a predetermined pitch interval by ^{the} forwardly/backwardly rotating [a circular permanent magnetic unit by a magnetic force generated between a plurality of armature coils and the permanent magnetic unit, a driving gear for receiving the forward/backward rotation force generated from the forward/backward rotation force generating means by means of a gear and simultaneously

20 carrying the tape at a constant distance by the formation of driving teeth at the circumference surface thereto to be inserted to a tape transfer hole, a position sensing unit assembled to an end of the driving gear and for sensing the position of the circular

25 permanent magnetic unit by an absolute position sensing device;

✓ a vinyl separation unit being connected to a side

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of a parts feeding unit by a first separation unit gear,
and carrying the vinyl removed from the tape by the
forward force generated from the forward/backward
rotation force generating means or re-carrying the vinyl
5 by the backward rotating force; and

22 a vinyl recovery unit being connected to the vinyl
separation unit by a belt, and recovering the vinyl by
winding the same by the rotating force transferred from
the vinyl separation unit through the belt or
10 discharging the vinyl to the vinyl separation unit by
the backward rotating force.

2. The feeder for a surface mounting device of
claim 1, wherein the forward/backward rotation force
15 generating means comprises:

a first disc member fixedly assembled at one side
of the main frame and having a plurality of armature
coils assembled on its plane at a predetermined interval,
a rotating shaft rotatably installed at its center by
20 interposing a ball bearing;

a second disc member fixedly assembled at one side
of the rotating shaft and linked by the rotation of the
rotating shaft;

25 the a circular permanent magnetic unit mounted between
the first and ^{the} second disc members and for generating a
forward/backward rotation force between a plurality of
armature coils; and

a feeding unit gear mounted at one side of the rotating shaft and for transferring the rotation force of the rotating shaft.

5 3. The feeder for a surface mounting device of claim 1, wherein the vinyl separation unit comprises:

a first separation unit connected to a feeding unit gear of the parts feeding unit;

a second separation unit connected to one end of a
10 gear of the first separation unit and rotated by the forward/backward rotation of the gear of the first separation unit;

 a vinyl discharge gear connected to a plurality of gears and rotated in the backward direction by the
15 forward rotation of the gear of the second separation unit to carry the vinyl to the outside or to re-carry the vinyl by the backward rotation of the gear of the second separation gear.

20 4. The feeder for a surface mounting device of claim 1, wherein the vinyl recovery unit comprises:

 a recovery unit gear connected to the vinyl separation unit by a belt and for forwardly/backwardly rotating by receiving the forward/backward rotating
25 force generated by the vinyl separation unit; and

 a recovery reel assembled at one side of the recovery unit gear, rotated according to the rotation of

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the recovery unit gear, thereby discharging the wound
and recovered vinyl to the vinyl separation unit.

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